BAE SYSTEMS

April 12, 2011

BY HAND DELIVERY AND ELECTRONIC FILING

Julius Genachowski
Chairman
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: FREQUENCY BANDS IDENTIFIED BY NTIA AS POTENTIAL BROADBAND SPECTRUM, ET Docket No. 10-123

Dear Chairman Genachowski:

In response to requests from various Commission officials regarding new frequency bands for broadband wireless access (BWA) deployment (ET Docket # 10-123), BAE Systems Information and Electronic Systems Integration Inc. ("BAE Systems") supports the cautious approach that the FCC is taking. BAE Systems also commends the FCC for its leadership in supporting innovative technologies such as Cognitive Radio (CR) and Dynamic Spectrum Access (DSA) for new frequency bands.

BAE Systems has been engaged in Cognitive Radio Technology development and deployment for many years. BAE Systems has been actively participating in the IEEE 802.22 Standard on Wireless Regional Area Networks (WRAN) and IEEE 802.16 Standard on Wireless Metropolitan Area Networks (WMAN).

In particular, the IEEE 802.22 Standard, which will be published soon, is the first standard that incorporates true cognitive capabilities such as DSA, access to the incumbent database, accurate geo-location techniques, spectrum sensing, primary user protection beacon, spectrum etiquette, regulatory domain dependent policies and co-existence. Although the IEEE 802.22 Standard has been designed for operation in the TV Whitespaces, the concepts that have been developed therein, apply to other bands and other technologies.

We support the cautious approach that the FCC is taking for deployment of BWA in new frequency bands. In particular,

1. We support creation of exclusion zones for the 1675 – 1710 MHz and 3550 – 3650 MHz.
2. Specifically in the 3550-3650MHz band, communication equipment can suffer from significant interference issues due to military radars many 10's to 100's of miles inland. However, it may be possible to design a mobile/fixed BWA communications standard, similar to what the IEEE 802.22 Standard does in TV Whitespace, which could ultimately share the band with radars and achieve interoperability in the time domain.
3. The database access approach that has been recommended for the TV Whitespaces may not be sufficient to provide protection in these bands. Other faster approaches such as primary user protection beacons (e. g. IEEE 802.22.1-2001 Standard) and radar spectrum sensing and timing may be required in order to ensure protection for these national assets.

We respectfully encourage the FCC to continue this dialogue so that commercial technologies can be created that can sufficiently provide protection to the incumbent federal users operating in these frequency bands.

Respectfully submitted,

David Cooper.

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